

**ABSTRACT OF THE INVENTION**

The present invention provides isolated modified inosine 5'-monophosphate dehydrogenase (IMPDH) polypeptides. These modified IMPDH polypeptides comprise a substitute oligo-peptide that replaces the subdomain region. The modified polypeptides of the invention bind to an inhibitor, such as MPA, and/or exhibit functional activity of wild-type IMPDH holo-enzyme.

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1000 900 800 700 600 500 400 300 200 100